

In the title:

Kindly amend the title as follows:

~~A method of creating a high performance virtual multiprocessor by adding a new dimension to a processor's pipeline.~~
METHOD AND APPARATUS FOR CONVERTING A PROCESSOR INTO A COMPATIBLE VIRTUAL MULTITHREADED PROCESSOR (VMP)

DEC 27 2004

In the Specification:

At page 6, 3rd paragraph, bridging on to page 7, 1st paragraph, kindly amend as follows:

Reference is now made to Fig. 5, which is a simplified flowchart illustration of a method of converting a computer processor into a virtual multithreaded processor (VMP), operative in accordance with a preferred embodiment of the present invention. In the method of Fig. 5 a single-threaded processor with a k-phased pipeline is converted into an n-threaded VMP with n*k-phased pipeline, where n is a whole number greater than one and k is a whole number greater than zero. The VMP is compatible with the original processor, being able to run the same binary code as the original processor without modification. The VMP operates at a clock frequency that is up to n times higher than the original clock frequency, due to the n-fold deeper pipeline. Up to n interleaved threads, where each thread is an independent program, are run simultaneously. The VMP compensates for pipeline penalties, such as stalling and idling, that are usually introduced when adding phases to a conventional pipeline.